Background: Kinesio Tape is claimed to have the effect of increasing muscular pressure. Aim of the study: was to find the effect of the Kinesio tape as a muscle technique applied to the primary respiratory muscles and accessory respiratory muscles on maximum inspiratory pressure (MIP) and maximum expiratory pressure (MEP). Methods: Sixty normal male subjects their ages ranged from 20 to 30 years old. They were recruited from under & post graduate students at Faculty of physical therapy, Cairo University. The Subjects were randomly divided into 2 groups equal in number, Group A included 30 subjects, the Kinesio tape was applied to the primary inspiratory muscles(diaphragm and scaleni ) of the subjects every 4 days for 3 weeks. Group B included 30 subjects, the Kinesio tape was applied to the sternocleidomastoid (as accessory inspiratory muscle) and to the external abdominal oblique and internal abdominal oblique (as accessory expiratory muscles) .The Kinesio tape application session was once every 4 days for a total study program of three weeks. Results: There was a significant increase in the MIP in the group (A) compared with that of group (B) after the study program and there was a significant increase in the MEP in the group (B) compared with that of group (A) after the study program. Conclusion: The results of this study support the importance of applying Kinesio tape over respiratory muscles to improve their pressure.
This study was conducted to investigate the hormonal effect of different menstrual phases on hip abductor torque in non-athletic females. Twenty-seven non-athletic virginal females participated in this study. They had regular menstrual cycles. Their ages ranged from 20 to 30 years and their body mass index (BMI) was < 30 kg/m². Serum estradiol, serum progesterone and hip abductor torque were assessed during the early follicular and mid-luteal phases of the menstrual cycle. Results showed that there was a statistically significant increase in serum progesterone (P=0.0001) and hip abductor torque (P=0.047) in the mid-luteal phase compared to the early follicular phase, while the increase in serum estradiol was non-significant (P=0.843). Additionally, there was a significant negative correlation between serum estradiol and hip abductor torque (P=0.04) only in the early follicular phase. It can be concluded that the non-athletic females showed significant decreases in the progesterone level and hip abductor torque in the early follicular phase. The significant negative correlation between the serum estradiol and hip abductor torque indicates that the females with high estradiol level at the early follicular phase could have low abductor torque that increases the liability to injury.

**Key words**

1. Menstrual phases.
2. non-athletic females
3. Estradiol.
4. hip abductor torque.
5. Hormonal Effect.
6. progesterone.

**Classification number**

000.000.

**Pagination**

74 p.

**Arabic Title Page**

التأثير الهرموني للمراحل المختلفة من الدورة الشهرية على عزم العضلات المبعدة للفخذ في الإناث الغير رياضيات.
**Title**: Effect Of Pectoralis Minor Myofascial Release On Functional Capacity In Patients With Chronic Obstructive Pulmonary Disease

**Dept.**: Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

**Supervisors**
1. Zahra Mohamed Hassan Serry
2. Ahmad Mahdi Ahmad Mohammad
3. Mohamed Shaker Sadek El-Sayed

**Abstract**

The purpose of this study: The pectoralis minor muscle, though being small and seemingly insignificant accessory muscle of respiration, it can play an important role in thoracic movement mechanics in patients with chronic obstructive pulmonary disease (COPD). Previous studies which investigated the effect of manual therapy in COPD patients did not include myofascial release for this muscle. Therefore, the purpose of this study was to determine acute effect of a single physiotherapy session of pectoralis minor myofascial release followed by strengthening exercises for scapular retractors and shoulder depressors on ventilatory function, chest expansion, and pectoralis minor muscle tightness pain in patients with chronic obstructive pulmonary disease (COPD).

**Subjects and methods**: Fifty four patients with COPD were included in this study and were divided into two groups; Group (A) included 27 male patients, Group (B) included 27 male patients. Group A received one pectoralis minor myofascial release session plus strengthening of scapular retractors and shoulder depressors. Group B received a single bronchodilator inhaler therapy dose. Measurements of spirometry, chest expansion and verbal descriptor scale (VDS) of pectoralis minor muscle tightness pain were performed before and after the interventions. The spirometry measurements were forced expiratory volume in first second (FEV₁), forced vital capacity (FVC), and maximum voluntary ventilation (MVV). Parametric statistics were used to analyze the data.

**Results**: This study demonstrated that one physiotherapy session composed of pectoralis minor myofascial release and strengthening exercises for scapular retractors and shoulder depressors has increased FEV₁, FVC, MVV, Chest Expansion, and VDS significantly in COPD patients compared to baseline values. However, when compared to group B, there was no significant difference between the two groups. Conclusion: Myofascial release of pectoralis minor muscle can be very beneficial for patients with COPD, which can aid in improving their ventilatory function, chest expansion, muscle tightness pain. This together with strengthening of scapular retractors and shoulder depressors can represent a new protocol of physiotherapy treatment that may be introduced for COPD patients in pulmonary rehabilitation programs.

**Key words**
1. Chronic obstructive pulmonary disease.
3. Ventilatory functions.
4. Pectoralis minor.

**Classification number**: 000.000.

**Pagination**: 77 p.

**Arabic Title Page**: تأثير تحرك الأنسجة الرخوة للعضلة الصدرية الصغرى على الكفاءة الوظيفية لمرضى السدة الرئوية المزمنة.

**Library register number**: 5993-5994.
Laser Versus Kinesio Taping In Management Of Diabetic Frozen Shoulder

Purpose: This study was to determine selected laser efficacy versus kinesio taping on treatment of diabetic frozen shoulder patients. Subjects: Forty patients (men and women) with diabetic frozen shoulder were randomly selected from different military hospitals to Physical Medicine and Rehabilitation Center, Cairo, Egypt where the study was conducted. Study started at October 2015 and ended at July 2016, their age ranged from (50 to 60) years. They were assigned into two groups equal in number 20 patients in each group. Methods: The group (A) completed 8-weeks program of low intensity laser with exercises and group (B) completed an 8 weeks of kinesio taping with exercises. Pain is measured for the two groups with VAS and range of motion is measured with Biodex medical system. Results: There was a significant decrease in the VAS in the group A compared with group B post treatment (p = 0.0001). There was no significant difference in the flexion ROM between group A and B post treatment (p = 0.62). There was no significant difference in the extension ROM between group A and B post treatment (p = 0.07). There was a significant increase in the abduction ROM of group A compared with group B post treatment (p = 0.0001). There was a significant increase in the adduction ROM of group A compared with group B post treatment (p = 0.0001). There was a significant increase in the external rotation ROM of group A compared with group B post treatment (p = 0.0001). There was a significant increase in the internal rotation ROM of group A compared with group B post treatment (p = 0.01). Conclusion: It was conclude that, using as an adjuvant of treatment to medical treatment for diabetic frozen shoulder better than using kinesio.

Key words

1. Frozen shoulder.
2. Biodex medical system
3. Laser in Diabetic Frozen Shoulder
4. Kinesio Taping In Diabetic Frozen Shoulder

Classification number : 000.000.

Pagination : 121p.

Arabic Title Page : الليزر مقابل شريط الكينيزيو في علاج تجمد الكتف السكري.

Library register number : 6089-6090.
### Background:
Previous studies show that respiratory muscle trainer and diaphragmatic resistive exercise show effect on maximum inspiratory pressure on patients suffering from interstitial pulmonary fibrosis. Purpose of the study: To compare between the different effect of inspiratory muscle trainer and resistive diaphragmatic breathing on maximum inspiratory pressure and blood gases in patients with interstitial pulmonary fibrosis. Subjects and methods: thirty patients (13 males and 17 females) with interstitial pulmonary fibrosis were selected from ElHussien hospital. Their ages range from 50 to 60 years old. Patients were participated in physical therapy program for eight weeks, patients are assigned into two groups (A-B) equally in number. Group (A): (6 males and 9 females) received inspiratory muscle trainer for diaphragmatic breathing exercise for 8 weeks 3 sessions per week. Group (B): (8 males and 7 females) received resistive diaphragmatic exercise for 8 weeks 3 sessions per week. Results and conclusions: Results showed that using inspiratory muscle trainer was more effective and fruitful than diaphragmatic breathing exercise on maximal inspiratory pressure and blood gases in interstitial pulmonary fibrosis as evidenced by significant increase in measuring maximum inspiratory pressure and blood gases. Conclusion: inspiratory muscle trainer is more effective than diaphragmatic breathing exercise in increasing maximal inspiratory pressure and blood gases in interstitial pulmonary fibrosis.

### Key words
1. Inspiratory muscle trainer.
2. blood gases.
3. diaphragmatic breathing exercise.
4. interstitial pulmonary fibrosis.
5. maximum inspiratory pressure.
<table>
<thead>
<tr>
<th>Author</th>
<th>Fatem Mahmoud Eldesoky Abdelslam.</th>
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<tbody>
<tr>
<td>Title</td>
<td>Electrical Stimulation Versus Aerobic Exercise On Anti-Gravity Muscles In Elderly Women.</td>
</tr>
<tr>
<td>Dept.</td>
<td>Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.</td>
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</tbody>
</table>
| Supervisors             | 1. Azza Abd El-Aziz Abd El-Hady.  
                           | 2. Kamal Abd El-Ghaffar Alghonemy. 
| Degree                  | Master.                            |
| Year                    | 2018.                              |
| Abstract                | Electrical Stimulation Versus Aerobic Exercise On Anti-Gravity Muscles In. |

Purpose: to consider and compare the effect of faradic and aerobic exercise on lower limb antigravity muscles in healthy non-athlete elderly women. Methods: 40 elderly women aged from 60-70 yrs from normal subjects (patients' companions in Itay El-Baroud hospital). They were divided into two groups, group (A) and group (B). Results: the results showed that in group (A): significant outcomes for MMT and 6-MWT which $P \leq 0.001$, non-significant for Mid-Thigh Girth which $P$-value $> 0.05$. In group (B) the outcomes increases more than group (A) but the difference results between the two groups was non-significant. Conclusion: Adding of faradic stimulation to aerobic exercise improving the results.

<table>
<thead>
<tr>
<th>Key words</th>
<th>1. Ageing.</th>
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<td></td>
<td>2. Antigravity muscles.</td>
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<td></td>
<td>3. Electrical stimulation</td>
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<td>4. Aerobic exercise.</td>
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<td>5. Elderly Women in Antigravity muscles.</td>
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Classification number : 000.000.

Pagination : 95 p.

Arabic Title Page : التنبيه الكهربائي مقابل التمارين على العضلات المضادة للجاذبية عند السيدات كبار السن

Library register number : 6145-6146.
Background: Chronic kidney disease (CKD) is a major health problem worldwide with increasing incidence and prevalence. Exercise is often recommended for patients with chronic kidney diseases to improve physical conditioning and reduce complications of diseases. Objective: The purpose of this study was to evaluate the effect of incentive spirometer training on diaphragmatic excursion and quality of life (QoL) in hemodialysis (HD) patients. Subjects and methods: sixty HD patients (30 men and 30 women) participated in the study, their ages ranged from 45-55 years. They were assigned randomly into two groups; 30 patients each: Group (A) received incentive spirometer training with hemodialysis for 8 weeks, 3 sessions per week. Group (B) maintained on hemodialysis only for 8 weeks 3 sessions per week. The study was carried out in the duration from July 2017 to January 2018. Pre and post assessment of diaphragmatic excursion by ultrasonography, 6 min walk test and QoL by SF-36 questionnaire were performed for all patients in both groups. Results: incentive spirometer training induced a significant improvement in diaphragmatic excursion, 6 min walk test result and quality of life score in study group with percent of increase of 24.62%, 12.52%, 55.67% respectively while there were deterioration in control group with percent of decrease of 26.49%, 6.13%, 38.68% respectively. Conclusions: incentive spirometer training for 8 weeks in HD patients results in an improvement of diaphragmatic excursion, the distance walked during 6 min walk test and the QoL score.
<table>
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<tr>
<th>Author</th>
<th>Heba Abd El Maboud Yusuf.</th>
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<tr>
<td>Title</td>
<td>Effect Of Aerobic Training And Inspiratory Muscle Trainer On Ventilatory Functions In Haemodialysis Patients.</td>
</tr>
<tr>
<td>Dept.</td>
<td>Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.</td>
</tr>
</tbody>
</table>
| Supervisors            | 1. Zahra Mohamed Hassan Serry  
                          | 2. Sahier Omar Elkhashab  
                          | 3. Heba Ahmed Bahy El Deen |
| Degree                 | Master. |
| Year                   | 2018. |
| Abstract               | Background: Decreased respiratory muscle strength is associated with decreased pulmonary functions and considered as a serious mortality risk in patients on hemodialysis. Aim: This study was conducted to evaluate the effect of 12 weeks of supervised aerobic training program combined with Inspiratory Muscle Trainer (IMT) and using Inspiratory Muscle Trainer (IMT) only on ventilatory functions in hemodialysis patients (HD). Subjects and Methods: Thirty patients from both sexes participated in the study. They were divided randomly into two groups equal in number. Ventilatory functions were measured by electronic spirometer including (Forced vital capacity (FVC), forced expiratory volume in one second (FEV1), FEV1/FVC, peak expiratory flow (PEF) and maximum voluntary ventilation (MVV) in HD patients respectively. Group (A) received combined IMT with supervised program of aerobic training in the form of leg pedaling exercises, while Group (B) received IMT only. Results: The results of this study revealed significant improvement in all measured values of ventilatory functions in both groups except FEV1/FVC. As group (A) shows percentage of improvement equal FVC(12.89%), FEV1 (17.21%), PEF(29.01%), MVV(17.43%) while group (B) shows improvement in FVC(22.84%), FEV1 (29.44%), PEF(73.47%), MVV(20.79%). It was more significant in favor of group B regarding FVC, FEV1and PEF. Conclusion: It was concluded that either a combined IMT with supervised program of aerobic training or IMT alone for 12 weeks, both have significant improvement regarding ventilatory functions in hemodialysis patients, while it was more significant with IMT only except MVV. |
| Key words              | 1. Hemodialysis.  
                          | 2. Aerobic Training, Leg Pedaling.  
                          | 3. Inspiratory Muscle Trainer.  
                          | 4. Ventilatory Functions.  
                          | 5. Pulmonary function |
| Classification number  | 000.000. |
| Pagination             | 85 p. |
| Arabic Title Page      | تأثير التمرينات الهوائية مصحوبة بجهاز التمرين التنفسي على وظائف الرئة لدى مرضى الغسيل الكلوي. |
| Library register number| 6183-6184. |
Objective: The aim of this study was to investigate the Response of Arterial Blood Gases to Positive End Expiratory Pressure Titration for Mechanically Ventilated Obese Patients. Methods: sixty mechanically ventilated obese patients undergoing general anesthesia, their age ranged from 40-50 years old, with BMI class I obesity (30-34.9) kg/ m² and both sexes participated in this study, were enrolled and were selected inside Operation Room (OR) of the surgical department, second floor of Manial in Kasr Al Aini hospital, Cairo, Egypt. The study was conducted from May 2018 to August 2018. They were randomly assigned into two groups equal in number. Group (A): thirty participants that had received (PEEP titration twice 30 cmH2o for 30 seconds + Reverse Trendlendburg Position RTP for 20 minutes at 3rd & 4th phase of operation) as one shot treatment. Group (B): thirty patients who received (Reverse Trendlendburg Position RTP for 20 minute at 3rd phase of operation). The measurement of Pao2/ Fio2 ratio, PaCo2 from Arterial Blood Gases (ABGs) & Cstat from mechanical ventilator monitor and blood pressure &Mean Arterial Blood Pressure (MAP) from arterial line and patients vital signs monitor were obtained before and after the procedure. Results: group (A): Significant increase was observed in respiratory parameters (Pao2/ Fio2 ratio, PaCo2 & Cstat) in study, percent of changes were (Pao2/ Fio2 increased by 34.8%, PaCo2 is of Pre PaCo2 increased by 21.43%, Cstat increased by 8.4%), while significant decrease in hemodynamics (SBP decrease by 13.8%, DBP decreased by 12.2% and MAP decreased by 12.7%). On the other hand, Group (B): Non-significant increase was observed in respiratory parameters (Pao2/ Fio2 ratio, PaCo2 & Cstat) in study, percent of changes were (Pao2/ Fio2 increased by 10.5%, PaCo2 is of Pre PaCo2 increased by 11%, Cstat increased by 0.3%), as well as non-significant decrease difference in hemodynamics (SBP decrease by 6.2%, DBP decreased by 3.6% and MAP decreased by 4.7%). Conclusion: PEEP titration and reverse trendlendburg position have positive effects on respiratory mechanics by significant increase Pao2/ Fio2 ratio, PaCo2 & Cstat of mechanically ventilated class I obese patients, and significant decrease in hemodynamics of BP& MAP.

Key words
1. Positive End Expiratory Pressure.
2. mechanical ventilator.
3. Arterial Blood Gases.
4. obese patient.
5. Reverse Trendlendburg Position.

Classification number : 000.000.

Pagination : 72 p.

Arabic Title Page :
استجابة غازات الدم الشرياني لاستخدام معايرة ضغط نهاية الزفير الإيجابي لمرضى التنفس الصناعي المصابين بالسمة.

Library register number : 6167-6168.
# Abstract

Background: Obesity represents an important cardiovascular risk factor. Weight reduction is the common goal in the treatment of obesity. There is sufficient evidence supporting the role of exercise training in promoting weight loss. Measures of obesity, such as body mass index, may be associated with higher resting cardiac troponin (cTn) level. The purpose: To determine cardiac troponin response to resisted versus aerobic exercises in obese women. Methodology: Forty obese women randomly selected from employers of Kasr Al Aini teaching hospital, their ages ranged from 30 to 40 years and their BMI from 30-35kg/m². This study conducted from September 2017 to January 2018 at Kaser Al-Aini teaching Hospital, Cairo governorate, Egypt, confidentiality was assured. Design of the study: Subjects were assigned randomly into two equal in number (A and B). Group (A) received a single bout of resisted exercise. Group (B) received a single bout of aerobic exercise. Cardiac troponin I (cTnI) was analysed before and after 3 hours of the exercise bout. The Results: There was a significant increase in cTnI in group (A) and (B) when comparing pre and post exercise values, there was significant difference in the cTnI of group A compared with that of group B post exercise (The mean difference between both groups was 0.01 ng/ml) and there was non significant weak correlation between BMI and cTnI level in both groups pre and post exercise. Conclusion: Aerobic exercises were more suitable and safe than resisted exercises for obese women.

## Key words
1. Obesity
2. resisted exercise
3. aerobic exercise
4. cardiac troponin

## Arabic Title Page
استجابة تروبوتين القلب لتمرينات المقاومة مقابل الهوائية لدى السيدات البدنات.

## Library register number
6027-6028.
The purpose: to compare the effect of interval aerobic exercise versus cupping therapy on essential hypertensive women. Subject and methods: Thirty hypertensive women patients their age between (30:40) years old. They were diagnosed with specialized physician as stage I essential hypertension (140:160 mmHg Systole), (90:100 mmHg Diastole). Subjects were recruited from internal medicine out-patient clinic at Internal Medicine Department at Ain Shams General Hospital and in Al Safwa outpatient clinic. The study started from January 2014 to December 2016. Patients were randomly assigned into two equal groups. Group (A) fifteen hypertensive women received aerobic interval exercise 15:20 min for session three times per week for a month, Group (B) fifteen hypertensive women received one cupping therapy session (20 Minutes) on six points in the neck and back at the beginning of a study month. Results: There was significant reduction of systolic blood pressure at post treatment in compare to pre-treatment and this mean there was improvement of systolic blood pressure in group (A): 13.79%. and group (B): 11.5 %. In spite of there was no statistical significant difference between group (A) and group (B), there was clinical difference and high improvement in favor to group (A). There was improvement of diastolic blood pressure in group (A): 11.96 % and group (B): 13.19%. In spite of there was no statistical significant difference between group (A) and group (B), there was clinical difference and high percent of improvement in favor to group B. Conclusions: It was concluded that participation in aerobic interval exercise or cupping therapy have positive effect on blood pressure in stage one essential hypertensive women and can be used as alternative treatment modalities.

| Key words | 1. essential hypertension.  
|           | 2. cupping therapy.  
|           | 3. interval aerobic exercise  

| Library register number | 5833-5834.  
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<tr>
<td>Author</td>
<td>Maged Ali Abd El Hamid Ali Meawad.</td>
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<tr>
<td>Title</td>
<td>Efficacy Of Different Physical Therapy Modalities In Prevention Of Ventilator Associated Pneumonia.</td>
</tr>
<tr>
<td>Dept.</td>
<td>Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.</td>
</tr>
</tbody>
</table>
| Supervisors         | 1. Hany Ezat Obaya  
|                     | 2. Sabah Ahmed Mohamed |
| Degree              | Master. |
| Year                | 2018. |
| Abstract            | The purpose of this study was to find out The Efficacy of Different Physical Therapy Modalities In Prevention Of Ventilator Associated Pneumonia. Method: Thirty patients post mechanical ventilation, their mean value is 55.93 ± 3.26 years old were recruited in this study. The patients received chest physiotherapy (percussion, vibration, manual hyperinflation), positioning and limb exercises twice a day for 3 successive days. Results: increase in PaO2 (7.59%) and SO2 (8.17%) and decrease in PaCO2(21.67%), TLC(25.66%), Respiratory rate(28.18), Heart rate(17.04%) and temperature(2.48%) besides decreased incidence of chest infection and decreased intensive care unit stay in the study. Conclusion: The results of this study support the importance of multimodality chest physiotherapy in prevention of ventilator associated pneumonia, decrease intensive care unit stay and decrease health costs. |
| Key words           | 1. chest physiotherapy ventilator associated pneumonia  
|                     | 2. Mechanical ventilation  
|                     | 3. Physical Therapy Modalities |
| Classification number | 000.000. |
| Pagination          | 97 p. |
| Arabic Title Page   | تأثير وسائل العلاج الطبيعي المختلفة في الوقاية من الالتهاب الرئوي المرتبط بجهاز التنفس الصناعي. |
| Library register number | 6029-6030. |
Hypertension is common risk factor for Glaucoma, due to its direct effect on intraocular pressure, that increase the risk for open angle glaucoma. This study investigated aerobic exercise efficacy on intraocular pressure in hypertensive glaucoma patients. Subjects: Forty hypertensive open angle glaucoma patients were randomly selected from outpatient clinic of Mansoura ophthalmic hospital with ages from (40to55 years). They were divided into two matched groups with equal numbers 20 patients in each group, these groups included the experimental and the control groups. Methods: The Experimental group completed an eight-weeks of aerobic exercises using (cycle ergometer) three times per week for thirty minutes in each session at moderate intensity (50%-70%) of heart rate maximum plus their medical treatment. The control group took only routine medical treatment. Intraocular pressure for each eye was measured by tonometry and Mean arterial pressure was estimated before and after study. Results: There was significant reduction in the intraocular pressure for the Rt and Lt eyes and the Mean arterial pressure values after treatment when compared with the treatment values in the study group with no significant changes in the control group. Conclusion: It was concluded that aerobic exercises are effective in reduction of intraocular pressure and blood pressure in hypertensive glaucoma patients.

1. Hypertension.
2. Aerobic exercises.
3. Intraocular pressure.

Tأثير التمرينات الهوائية على ضغط العين في مرضى جلوكاما ضغط الدم المرتفع.
### Title

Autogenic Drainage Versus Counter Rotation Effect On Blood Gases In Post Thoraco Abdominal Surgery.

### Dept.

Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

### Abstract

**Aim of the study:** To compare the effect of autogenic drainage and counter rotation on blood gases in thoraco abdominal surgery. Patients and methods: This study comprised 40 post thoraco abdominal surgery patients aged from 40-50 of both sexes who chosen from kasr El-Aini Hospital. They were assigned into two groups equal in number. Group A: 20 patients received first traditional physiotherapy (breathing exercise, percussion, vibration with postural drainage) then autogenic drainage Group B:20 patients received first traditional physiotherapy (breathing exercise, percussion, vibration with postural drainage) then counter rotation. The treatment was applied 3 times per day for 2 weeks. Data obtained from both groups regarding partial pressure of oxygen ($P_{O_2}$), partial pressure of carbon dioxide ($P_{CO_2}$), level of bicarbonate (HCO$_3$), oxygen saturation (SaO$_2$) and PH at 1$^{st}$, 7$^{th}$ and 14$^{th}$ days were statistically analyzed and compared. Results: The results of this study proved that in group A there were significant different in $P_{O_2}$, HCO$_3$, PH. But there were no significant different in $P_{CO_2}$ and O$_2$ saturation, between 1$^{st}$, 7$^{th}$ and 14$^{th}$ day. And proved that in group B There were significant different in $P_{O_2}$,HCO$_3$,SaO$_2$, PH but there was no significant different in $P_{CO_2}$, between 1$^{st}$,7$^{th}$ and 14$^{th}$ day. And there were no significant different between both groups in first day. But at the end of 14days there was significant difference in oxygen saturation between both group. There was a significant increase in SaO$_2$ of group A compared with that of group B at 14$^{th}$ day ($p = 0.001$). Conclusion: Autogenic drainage had a positive effect on oxygen saturation than counter rotation technique. The results of this study support the importance of adding autogenic drainage to traditional physiotherapy to improve oxygen saturation.

### Key words

1. Autogenic drainage
2. counter rotation
3. thoraco abdominal surgery
4. Arterial blood gases

### Classification number

000.000.

### Pagination

84 p.

### Arabic Title Page

مقارنة بين التصريف الذاتي والتناوب العداد وتأثيرهما على غازات الدم بعد جراحات الصدر والبطن.

### Library register number

6171-6172.
# Efficacy of Inspiratory Muscles Training on Quality Of Life for Patients on Chemotherapy

**Author:** Marian Atef Aziz Shafiq.  
**Title:** Efficacy of Inspiratory Muscles Training on Quality Of Life for Patients on Chemotherapy.  
**Dept.:** Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.  
**Supervisors:**  
1. Nesreen Gharib Mohamed El Nahas  
2. Heba Ahmed Ali Abdeen  
3. Maha Yahia Ismail Abd El Megeed  
**Degree:** Master.  
**Year:** 2018.  
**Abstract:**

**Background:** Cancer is a major public health problem that gives an economical burden on the patient and government. The incidence of different types of cell tumors are increasing nowadays. The purpose: This study was conducted to investigate the effect of inspiratory muscles training on quality of life for patients on chemotherapy. Material and methods: Forty male patients on chemotherapy for at least one cycle and their mean ages 37.1 ± 4.89 years. The patients were selected from National Cancer Institute, Cairo (inpatient ward). The study lasted from March 2018 to June 2018. Patients were randomly assigned into two groups. Group A (30 patients) who received inspiratory muscles training for 4 successive weeks, 5 sessions/week; and Group B (10 patients) acted as a control group on chemotherapy only. Data obtained from both groups regarding (FVC), (FEV1), FEV1/FVC ratio, (MVV), 2 min walk test and Quality of life questionnaire (FACT-G) were statistically analyzed and compared. Results: After 4 weeks of study period for both groups The analysis of the results revealed a statistical significant increase in (FVC), (FEV1) and (MVV) and improvement in 2 min walk test and quality of life questionnaire (FACT-G) in the study group (A) in comparison to the control group (B). This is in addition to non-significant improvement in FEV1/FVC ratio. Conclusion: It can be concluded that inspiratory muscles training can be adjunctive to the rehabilitation program for patients on chemotherapy aiming for enhancing their quality of life.

**Key words:**

1. Chemotherapy.  
2. quality of life.  
3. Inspiratory muscles training.

**Classification number:** 000.000.  
**Pagination:** 116 p.  
**Arabic Title Page:** فاعليه تدريب عضلات الشهيق و تاثيرها على جوده الحياة لمرضى العلاج الكيميائي.  
**Library register number:** 6169-6170.
**Objective:** To evaluate the effect of myofascial release for intercostal muscles and diaphragm on diaphragmatic excursion and ventilatory functions in post surgical pleural effusion. Background: Accumulation of fluid in pleural space may decrease function of respiratory muscles primarily because of increase of chest wall volume. Force-length relationship of respiratory muscles indicate that for a given neural activation, the pressure developed by muscles decrease with decreasing length. An increase of chest wall volume decrease length of inspiratory muscles mainly diaphragm and increase of expiratory muscles length. So, the aim of this study to maintain flexibility of intercostal muscles and diaphragm in order to get the optimum action of these muscles, increase diaphragmatic excursion and improve the ventilatory function of these patients. Subject and Methods: Forty volunteers (men only), their age ranged between 45-60 years old, their BMI ranged between (25-29.9) and they were randomly assigned into two groups equal in number. (Study group A): was enrolled in the myofascial release protocol for intercostal muscles and diaphragm in addition to traditional physical therapy program for pleural effusion. (Study group B): was enrolled in the traditional physical therapy program for pleural effusion only. Their diaphragmatic excursion and ventilatory functions (FVC, FEV1, FEV1/FVC) were measured before and after 8 weeks of training program for both groups. The myofascial release protocol performed a 1-hour session 3 times per week for 8 weeks. Results: Group (A) myofascial release group, showed a statistical significant improvement in both diaphragmatic excursion and ventilatory functions, that was 9.23%, more than the improvement in group (B) traditional physical therapy group, that was 5.57%. So, addition myofascial release technique in the physiotherapy program is effective on diaphragmatic excursion and ventilatory functions in post surgical pleural effusion. Conclusions: The myofascial release for intercostal muscles and diaphragm is effective on diaphragmatic excursion and ventilatory functions in postsurgical pleural effusion.

**Key words**

1. Pleural effusion.
2. Diaphragm.
4. Diaphragmatic excursion.
5. Ventilatory functions.
6. Intercostal muscles.

**Classification number**: 000.000.

**Pagination**: 134 p.

**Arabic Title Page**: تأثير تحريك الأنسجة الرخوة على إزالة عضلة الحجاب الحاجز في الريشاح الرئوي بعد الجراحات.

**Library register number**: 6155-6156.
Efficacy of Manual Hyperinflation in Supine Versus Lateral Decubitus Position in Unilateral Lung Diseases

Purpose: The aim of this study was to compare between the efficacy of Manual Hyperinflation (MHI) from supine versus lateral decubitus positions in mechanically ventilated patients with Unilateral Lung Diseases (ULD) especially patients suffered from Ventilator Associated Pneumonia (VAP) on Arterial Blood Gases (ABG).

Subjects and Methods: forty male patients with unilateral lung diseases (VAP). Their ages ranged from 40 to 50 years with body mass index were ranged from 18.5 to 29.9. The patients were selected from Kasr El-Aini Hospitals (intensive care unit) and randomly divided into two equal groups: Group A (Supine group) composed of 20 patients with unilateral lung disease who received manual hyperinflation from supine lying in addition to chest physiotherapy and Group B (Side lying group) composed of 20 patients with unilateral lung disease (VAP) who received manual hyperinflation (MHI) from side lying (upper most affected) in addition to chest physiotherapy.

Results: The results of this study revealed that Group A(Supine group) and Group B(Side lying group) showed significant improvement in Arterial Blood Gases (PaO2, PaCo2, SaO2 and PaO2/FiO2) but by comparison the two groups we found that Group B (Side lying group) showed greater improvement in (PaO2, SaO2 and PaO2/FiO2) than Group A(Supine group), but there were not significant improvement in (PaCO2) between the two groups. Conclusion: Manual Hyperinflation (MHI) can improve Arterial Blood Gases in mechanically ventilated patients with unilateral lung diseases in lateral decubitus position more than supine position.
Introduction: Although expiratory muscles have been little studied it is known that expiratory muscle strength is impaired in most patients with significant chronic obstructive pulmonary disease (COPD), the expiratory muscles partake in the generalized muscle weakness that is observed in those patients. The decreased expiratory muscle strength was associated with reduced patient’s exercise capacity. There is need to find an alternate cost effective, easy technique which can help strength the expiratory muscles and improve the exercise capacity. An intervention like applying positive end expiratory pressure (PEEP) training could help in strengthening of expiratory muscles and improving the exercise capacity in patient with COPD.

Procedure: Forty COPD men patients their age 45 to 65 years old from kasr Al Einy hospital were assigned into two equal groups: Group A consisted of 20 men whom received PEEP (10-20 cm H2o, 15 minutes session, once daily for 4 weeks) plus standard chest physiotherapy. Group B consisted of 20 men received standard chest physiotherapy only. Maximum Expiratory Pressure (MEP) and Six-minute walk distance (6MWD) were measured for each patient before and after treatment. Results: There was a significant difference (p= 0.041) between study and control group patients in MEP post treatment (84.35 ± 9.73 vs 77 ± 12.11 cm H2o) the percentage of improvement is 20.59% after applying Positive End Expiratory Pressure (PEEP). There was significant difference (p= 0.045) between study and control group patients in 6MWT post treatment (339.7 meter ± 54.126 vs 301.65 meter ± 61.78). The percentage of improvement is 17.73% after applying Positive End Expiratory Pressure (PEEP). Conclusion: Positive expiratory pressure therapy is efficient in improving the expiratory muscle strength and exercises capacity and helps COPD patients to improve their active life style.
Background: There is a great deal of variability in the cortisol level with regard to type, intensity, volume and frequency of exercise. Purpose: to determine the difference between aerobic and resistive exercises on cortisol level in hypertensive patients.

Methods: Forty mild essential hypertensive patients from nonsmoker men with age range from 40-50 years, with SBP ranges from (140-159) mm Hg and DBP from (90-99) mm Hg, participated in this study. They were chosen from External clinic of faculty of physical therapy, Cairo University. All patients were assigned randomly into two groups, equal in number. Their cortisol level was measured before, after two hours from 1st session and after 8 weeks of training program for both groups. Group A: 20 patients performed aerobic exercises in form of Treadmill walking exercise for 40 minutes at Intensity detected according to "karvonen equation". Group B: 20 patients performed resistive exercises at intensity: 40% to 60% of 1-RM. Patients performed 3 sessions per week for 8 weeks.

Results: Serum cortisol level before training in comparison to post1 (after 1st session) show no significant difference in both groups. Serum Cortisol level after training (post2-after 8 weeks) in comparison to before training was significantly decreased in Group A and in Group B, this decrease in favor of group A so there was significant difference in post training serum cortisol level between two groups. Conclusion: Aerobic exercise can lower serum cortisol level more than resistive exercise in hypertensive patients after 8 weeks of training and both of them has no effect on acute response of cortisol in hypertensive patients.

Key words
1. Serum Cortisol level.
2. Aerobic exercise.
3. Resistive exercise.
4. Hypertension.

Classification number: 000.000.

Pagination: 85 p.

Arabic Title Page: استجابة مستوى الكورتيزول للتمرينات الهوائية مقابل تمريناتمقاومة في مرضى ضغط الدم المرتفع.

Library register number: 5887-5888.
**Background and purpose:** Adipose tissue is an important site for energy storage and energy homeostasis. In addition, it has been recognized as an endocrine organ that produces and secretes a number of bioactive peptides or proteins called “adipokines”. These molecules are directly and indirectly involved in the pathogenesis of metabolic disorders, such as obesity, type 2 diabetes, cardiovascular diseases, and metabolic syndrome. Among these, adiponectin is known to be involved in improvement in insulin sensitivity and endothelial function, and promotion of fat oxidation. Aerobic exercise also has the same effects. The benefits of aerobic exercise could be induced through changes in adiponectin levels. In this study, focus was given to the effects of aerobic exercise on circulating adiponectin levels in women with type 2 diabetes. Methods: Forty women with type 2 diabetes mellitus were included in the study. Their body mass index (BMI) was ranging from 25 to 29.9 kg/m², and they were non-smokers, and free from respiratory, kidney, liver, metabolic and neurological disorders. Their ages ranged from 35 to 45 years. The subjects were divided into two equal groups: the first group (A) received aerobic exercise training (walking on treadmill) three times per week for 12 weeks, while the second group (B) was a control one. Both groups were on oral hypoglycemics. Result: There was statistical significant increase of adiponectin hormone level, FBG and Hb A1cin aerobic exercise group (p<0.05) compared to control group (p>0.05). Conclusion: It is suggested that aerobic exercise is appropriate for modulating, adipocytokines in diabetic type 2 women.

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<tr>
<th>Key words</th>
<th>1. Adiponectin hormone.</th>
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**Classification number**: 000.000.

**Pagination**: 92 p.

**Arabic Title Page**: تأثير التمرينات الهوائية على هرمون الأديبونكتين في السيدات المريضات بالسكري.

**Library register number**: 5907-5908.
**Effect Of Low Energy Laser on Inflammatory Markers And Weaning in Prolonged Mechanically Ventilated Patients.**

**Abstract:** Prolonged mechanical ventilation, defined as ventilation for 21 or more consecutive days with medical support. Low energy laser therapy has bio-stimulative and tissue regenerative properties as well as antimicrobial, anti-inflammatory and analgesic effects. The purpose: This study was conducted to investigate the therapeutic effectiveness of non-surgical gallium arsenide laser (905 nm) as an anti-inflammatory agent and its reflection on mechanical ventilator parameters, as well as inflammatory markers, in prolonged mechanically ventilated patients. Subjects and Methods: Thirty prolonged mechanically ventilated patients were selected from the two floors of critical care unit of Cairo University hospitals (Kasr el Ainy Hospitals), through a period of ten months, with ages ranged from 50 to 60 years old. The patients were divided into two equal groups, study group (A) included 15 patients (9 males and 6 female) who received low energy gallium arsenide laser therapy once a day in addition to the routine ICU physical therapy program for ten days from day 21 to day 31, while control group (B) included 15 patients (10 males and 5 females) who received routine ICU physical therapy program only. Results: The results revealed that low energy gallium arsenide laser therapy in group A had a considerable effect on CRP, TLC, PaO2, PaCO2, SaO2, ventilator FiO2, ventilator pressure support, MIP, respiratory rate, RSBI, with a significant increase in number of successfully weaned and discharged cases, However, it did not show improvement in ESR, PH, ventilator PEEP and minute ventilation. Conclusion: The results of our study support the importance of adding low energy gallium arsenide laser therapy into the intensive care physiotherapy program.

**Key words**

1. low energy laser,
2. prolonged mechanical ventilation weaning.
3. Inflammatory Markers in Mechanically Ventilated.
4. Weaning in Mechanically Ventilated
**Author** : Rowaida Ashraf Sayed

**Title** : Effect Of Aerobic Training On Cardiopulmonary Fitness In Women With Cancer Related Fatigue

**Dept.** : Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

**Supervisors**
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3. Aisha Abd Elmonem Hagag

**Degree** : Master.

**Year** : 2018.

**Abstract**
Background and purpose: Cancer-related fatigue (CRF) is the most common and devastating symptom in breast cancer women during and after therapeutic treatment. The purpose of this study was to find out the effect of aerobic training on cardiopulmonary fitness in women with cancer related fatigue. Methods and results: The study was conducted on forty women selected from Minia oncology center (Egypt) as breast cancer patients. They were assigned randomly into two equal groups their age ranged from 30-40 years. Patients were evaluated by Cardiopulmonary exercise test using (Modified Bruce protocol) and Multidimensional fatigue Inventory (MFI-20) before and after the study. The study group (A) received aerobic training for 8 weeks as 3 sessions /week each session last for 30-50 minutes and control group (B) were only advised to do breathing exercise. Results: There was significant improvement in cardiopulmonary parameters except for resting and maximum diastolic blood pressure and decrease in fatigue in group (A) compared to group (B). Conclusion: The study concluded that aerobic training increases cardiopulmonary fitness and decreases fatigue in women with cancer related fatigue.

**Key words**
1. Aerobic training.
2. Fatigue.
3. Cardiopulmonary fitness.
5. Women With Cancer Related Fatigue.

**Classification number** : 000.000.

**Pagination** : 86 p.

**Arabic Title Page**
تأثٕش انتمشٔىاخ انٍُائٕح عهّ نٕاقح انقهة َانشئً فٓ انسٕذاخ انمصاتاخ تالاعٕاء انمشتثظ تانسشطان.

**Library register number** : 5779-5780.
Purpose: The present study was conducted to investigate the efficacy of inspiratory muscle training on quality of life in patients with chronic heart failure. Subjects and Methods: Thirty chronic heart failure patients were included in this study, their ages ranged from 50 to 60 years, they had body mass index (BMI) ranged from 25 – 29.9 (kg/m²), they were selected from Tajora Heart Hospital in Libya and at the out-patient clinic, Faculty of Physical Therapy, Cairo University. They were divided randomly into two equal groups (A and B). Group (A) received selected physical therapy program about three times, while Group (B) received same physical therapy program that applied in the group (A) in addition to inspiratory muscle training using inspiratory muscle trainer (IMT). The variables that used on this study, included quality of life questionnaire (QLQ), dyspnea scale and ejection fraction, were assessed before and after treatment program in both groups. Both groups received treatment program 3 times/week for twelve weeks. Results: The results revealed significant improvement of all measured variables in two groups after twelve successive weeks, also revealed significant difference when compared the two groups after treatment in favor of the group (B). Conclusion: Within the limitation of the present study it could be concluded that: the IMT results in marked improvement in quality of life questionnaire (QLQ), dyspnea scale and ejection fraction.

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<th>Author</th>
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<td>Title</td>
<td>Effect Of Inspiratory Muscle Training On Quality Of Life In Patients With Chronic Heart Failure</td>
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| Supervisors             | 1. Zienab Mohammed Helmy  
                          | 2. Bassant Hamdy Al-refaay  
                          | 3. Shawky Abd El-hameed Fouad |
| Degree                  | Master. |
| Year                    | 2018. |
| Abstract                | |

1. Patients with chronic heart failure  
2. Inspiratory muscle trainer.  
3. Quality of life.

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<td>Arabic Title Page</td>
<td>تأثير تدريب عضلات الشهيق على جودة الحياة في مرضى فشل القلب المزمن.</td>
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<td>6065-6066.</td>
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The aim of this study was to determine the effect of pilates exercises on cardio metabolic risk factors in patients with type 2 diabetes. Forty type 2 diabetic women, their mean age from (35–55) years and mean BMI from (30-35) Kg/ m2. They were assigned into two equal groups A and B. Each of them consisted of 20 participants; Group A enrolled into Pilates exercise program, and Group B received their medical treatment only. The study lasted for 12 weeks at a frequency of 3 sessions per week. Evaluation included, weight, height, body mass index, glycated hemoglobin (HbA1c), blood pressure (systole, diastole), lipid profile, and waist hip ratio (WHR). All parameters were measured before and after program. Results showed a significant decrease HbA1c (8.35% in study group, 4.16% in controlled group), TC (10.57% in study group, 1.69% in controlled group), TG (11.98% in study group, 4.93% in controlled group) and TG/HDL ratio (17.96% in study group, 4.15% in controlled group) in both groups, significant decrease systolic blood pressure (9.1%), diastolic blood pressure (11.89%), LDL (17.03%), WHR (9.13%) and significant increase HDL (7.96%) in study group. Non significant change systolic blood pressure (0.92%), diastolic blood pressure (0.68%), LDL (1.24%), HDL (1.17%), and WHR (0.1%) in controlled group, with significant difference between both groups in blood pressure (systole, diastole), lipid profile, and waist hip ratio (WHR), in the favor of pilates exercises. Conclusion pilates exercises had valuable effects and significant improvements on decrease blood glucose level, blood pressure, lipid profile and WHR in type 2 diabetic women with significant difference between both groups in blood pressure (systole, diastole), lipid profile, and waist hip ratio (WHR).